

## **REMARKS**

Claims 1-51 are pending in the present application, with claims 1, 24, 37, 41, and 47 being independent. Reconsideration in view of the following remarks is kindly requested.

### ***Entry of Amendment Requested***

Applicant respectfully requests entry of this amendment by the Examiner since it raises no new issues; and the claims as amended do not require any further consideration or search by the Examiner, as any amendments were made either for reasons of clarity or to incorporate features shown in the figures that are consistent with a standalone load balancer that is not associated with any virtual server, as recited in the previously pending independent claims. Further, Applicant submits that, at the least, the amendment should be entered since it reduces the number of substantive and/or formal issues to place the application in better form for appeal.

### **Claim Rejections under 35 U.S.C. §103**

Claims 1-4, 6, 7, 13-17, 24-33, 35-37, 41, 42 and 44 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Skene et al. (U.S. Patent No. 7,047,301, hereafter "Skene") in view of Brendel et al. (U.S. Patent No. 6,182,139, "Brendel"). This rejection is respectfully traversed.

Claims 1, 24, 37, 41 and 47 are independent, and can be briefly described with reference to FIG. 1 below.

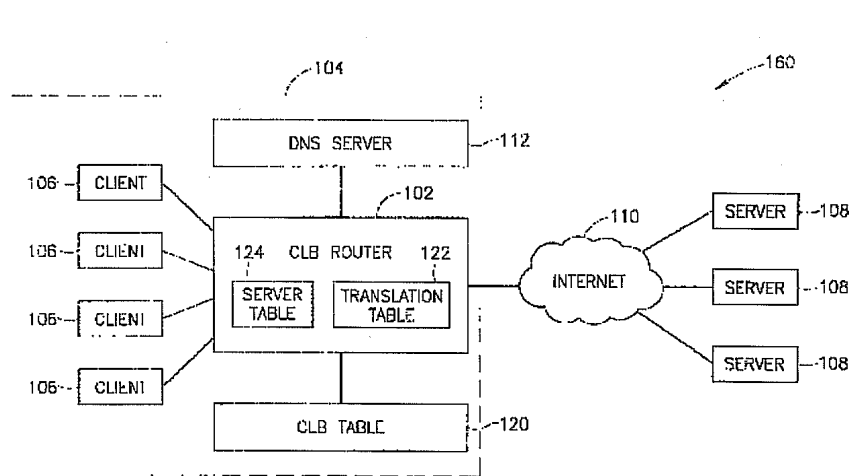


FIG.1

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Independent claims 1, 24, 37 and 47 are directed to methods for selecting a server, and independent claim 41 is directed to a load balancer. Referring to FIG. 1, independent claim 1 includes a load balancer not associated with the virtual server ... [which] comprises a client-controlled load balancer 102 that directly selects said one of the plurality of servers representing the virtual server (see 108) based on said one or more parameters". Independent claims 24, 37, 41 and 47 all include similar limitations.

**Claim 1.** In claim 1, the load balancer is standalone, such that it is not associated with any virtual server. These features are supported by FIG. 1 above, network 160 showing a standalone client-controlled load balancer (CLB) 102 between the clients 106 and servers 108 (in the context of a LAN 104), FIG. 5, which illustrates a CLB 500 that resides between client machine 106 and server machine 108. (See also, page 10, lines 1-12).

The Examiner admits at page 18, ll. 12-13 of the Final OA of September 20, 2007 that Skene, although allegedly teaching of a server-side load balancer that performs some type of dynamic load balancing (see EDNS server 160), is silent as to a teaching of any client-controlled load balancer.

Yet the Examiner relies on Brendel, alleging that in Brendel at col. 4, line 62 to col. 5, line 35 there is a teaching of "a client-controlled load balancer that directly selects said one of the

servers representing a virtual server.” The primary functions of this client dispatcher 20 are described below.

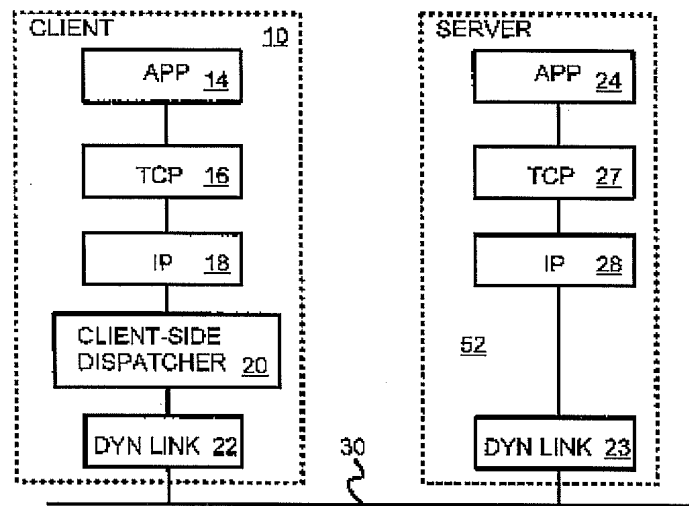


FIG. 3

In one application, client dispatcher 20 can intercept messages such as an error message from a server, and reassign another server to the client. The server errors are hidden from the user. In another application, once a URL is sent from the client application, the client dispatcher 20 assigns a remote server and migrates the connection over the Internet to the remote server. The client application or browser is not aware that the connection was migrated from the local machine to a remote node. (Brendel, col. 5, ll. 15-30).

It is unclear from the Office Action whether the Examiner, in modifying the system of Skene, is removing the EDNS server 160 completely from FIG. 1 as the server-side load balancer, and simply modifying each of the clients 150 in FIG. 1 of Skene so that each client is configured with an individual client-side dispatcher 20, or to augment EDNS server 160 with clients 150 each having their own client-side dispatcher 20 as taught in Brendel. It is thus not clear at all from the Final Office Action how the client dispatcher 20 would operate in conjunction with (or without) the EDNS server 160 of Skene's system.

Even assuming *arguendo* that the client dispatcher 20 could be construed as a standalone unit (i.e., not part of client 150 or EDNS server 160), which it is not, the hypothetical combination of Brendel with Skene would still result in sending out of multiple packets from clients 150 having the client-side dispatcher 20 to each SAC 101, 102, 103 (according to the only

load balancing technique described in Brendel at col. 5, ll. 38-44), and then selecting the SAC 101, 102, 103 that first responds. The selected SAC would then determine what virtual server in arrays 110-112 to select. This is not what is recited in claim 1; i.e., there is no a recitation of a SAC in claim 1 or any of the other independent claims that receives a command from a client-controlled load balancer and then selects a server,) In other words, since in either case (client-side dispatcher 20 replacing EDNS server 160 or being outfitted within each client 150) would have to send packets to the SACs the combination cannot be configured to directly select said one of the plurality of servers representing the virtual server based on said one or more parameters.

Accordingly, claim 1 and each of its dependent claims are allowable for at least the above reasons.

**Claim 3.** Notwithstanding the above, claim 3 is allowable for additional reasons. Claim 3 recites that the client-controlled load balancer resides between the client and the virtual server. In other words, as shown in FIGS. 1 and 5, the CLB 102/500 is a standalone unit.

The client dispatcher 20 in Brendel's FIG. 3 is designed to reside in the client machine 10. (Brendel, col. 5, ll. 10-11 and 55). Thus, this feature in claim 3 is notably absent in both Skene (there is no client-controlled load balancer, only a ) and Brendel (each client has its own client-side dispatcher that resides therein).

The entire focus of Brendel is to have a client-side dispatcher 20 residing in the client machine 10, which can be designed to augment an existing server load balancer 70 (see FIG. 1, col. 10, lines 25-31, col. 5, lines 45-52) or to take over for the server-side load balancer 70. Brendel admits that the load-balancing capabilities of the client-side dispatcher 20 are not as powerful as a server-side load balancer. (col. 5, ll. 45-47). The only load balancing methodology described in Brendel is what is known as the "Spray and Pray" technique (see Brendel, col. 5, ll. 38-44).

Accordingly, there is no teaching or suggestion anywhere in the text of Brendel as to a client-controlled load balancer that resides between the client and the virtual server. Therefore, the combination of Brendel with Skene does not arrive at the features recited in dependent claim 3.

**Claim 24.** With respect to claim 24, Skene and/or Brendel fail to describe or suggest wherein wherein the load balancer comprises a client-controlled load balancer that directly selects said one of the plurality of servers representing the virtual server based on said one or more parameters. Therefore, claim 24 and each of its dependent claims are allowable for at least this reason.

**Claim 27.** Claim 27 is allowable for additional reasons. Claim 3 recites that the client-controlled load balancer resides between the client and the virtual server. In other words, as shown in FIGS. 1 and 5, the CLB 102/500 is a standalone unit.

The client dispatcher 20 in Brendel's FIG. 3 is designed to reside in the client machine 10. (Brendel, col. 5, ll. 10-11 and 55). Thus, this feature in claim 3 is notably absent in both Skene (there is no client-controlled load balancer) and Brendel (each client has its own client-side dispatcher that resides in the client machine).

Accordingly, there is no teaching or suggestion anywhere in the text of Brendel as to a client-controlled load balancer that resides between the client and the virtual server. Therefore, the combination of Brendel with Skene does not arrive at the features recited in dependent claim 27.

**Claim 37.** With respect to claim 37, Skene and/or Brendel fail to describe or suggest wherein the load balancer comprises a client-controlled load balancer that directly selects said one of the plurality of servers representing the virtual server based on said one or more parameters.

In addition, the server in Skene and/or Brendel is not described or suggested as being selected partially upon the cost of communications between the client and one of the servers. The Examiner's analogy of "packet loss" to the cost of communication, as detailed on pages 18-19 of the Office Action, is misplaced. Applicant submits that the term cost is synonymous with price, e.g., monetary, associated with communication. For example, page 11, lines 7-21 of the present application clearly uses the term(s) cost(s) in a related context to cost schedules and charges, e.g., fees, prices or monetary costs associated with various connections and

communication paths. Packet loss is not a fee, a price or a monetary cost in the context of what is recited in Claim 37. This claim is allowable for this additional reason.

**Claim 41.** With respect to claim 41, Skene and/or Brendel fail to describe or suggest a load balancer, comprising . . . a processor that comprises a client-controlled processor that directly selects the server to service the client based on the at least one attribute. Therefore, claim 41 and each of its dependent claims are allowable for at least this reason.

Claims 8-10, 18-23, 34, 38-40, 43, and 47-51 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Skene et al. and Brendel, and further in view of Zisapel (U.S. Patent No. 6,249,801). This rejection is respectfully traversed.

Zisapel is limited in its applicability. However, Zisapel does not cure the deficiencies noted above in Skene and/or Brendel with regard to claims 1, 24, 37 and 41. Accordingly, claims 8-10, 18-23, 34, 38-40 and 43 are allowable at least for the reasons set forth above regarding claims 1, 24, 37 and 41. Withdrawal of the rejection as to claims 8-10, 18-23, 34, 38-40 and 43 is kindly requested.

**Claim 47.** With respect to claim 47, Skene and/or Brendel fail to describe or suggest wherein the load balancer comprises a client-controlled load balancer that directly selects said one of the plurality of servers representing the virtual server that minimizes or maximizes the chosen function. Withdrawal of the rejection as to claims 47-51 is kindly requested.

Claims 11, 12, 45 and 46 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Skene et al. and Brendel, and further in view of Cohen et al. (U.S. Patent No. 6,389,462). This rejection is respectfully traversed.

Cohen is limited in its applicability. However, Cohen does not cure the deficiencies noted above in Skene and/or Brendel with regard to claims 1 and 41. Accordingly, claims 11, 12, 45 and 46 are allowable at least for the reasons set forth above regarding claims 1 and 41. Withdrawal of the rejection is kindly requested.

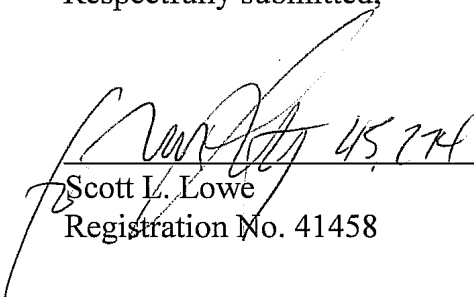
**CONCLUSION**

Accordingly, in view of the above amendments and remarks, reconsideration of the objections and rejections and allowance of each of claims 1-51 in connection with the present application is earnestly solicited.

Should there be any outstanding matters that need to be resolved in the present application; the Examiner is respectfully requested to contact Matthew J. Lattig at (703) 722-6642 direct.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 50-3828 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,



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